

STATE CONTROLLER'S OFFICE

CONTRACT COMPLETENESS CHECKLIST

Issued: March 1, 2007
Updated: April 12, 2007

*This checklist was developed to document compliance with the State Controller's re-engineering of the state's contracts process (March 1, 2007). As part of the process, every contract/amendment is required to have a "Risk Assessment" review. Prior to executing any state contract/amendment, all items in this checklist must be completed. This review is necessary to ensure that all contracts executed by the State Controller's Office or delegated agencies are: 1) In compliance with all applicable state of Colorado statutes and fiscal rules, 2) Contain all necessary and authorized signatures, and 3) Protect the state from unnecessary risk. Questions concerning the use of this checklist should be directed to the Office of the State Controller. **NOTE: All resources related to state contracting (i.e. contract policies, , contract Fiscal rules, Colorado Contract Procedures & Management Manual, sample "Model contract, and other tools) is located on the SCO website:** <http://www.colorado.gov/dpa/dfp/sco/contracts.htm>*

Date: _____ Reviewer: _____

CLIN Number/Higher Education Internal Routing #: _____

Type of Contract: _____

Current FY (July 1 – June 30) Contract Value: _____

TOTAL CONTRACT VALUE: _____

RECORD REQUIREMENTS:

- ____ Copy of the CLIN and CLI2
- ____ Encumbrance document created (specifically a PO or SC) **and** equals the same amount stated in the contract **and** the document is ready for Level 3 approval. **CHECKPOINT 1:** If the encumbrance does not equal the contract and/or amendment dollars because of an unusual circumstance, then the contract file must have a written statement by your agency/institution CFO that explains the situation.
- ____ Required approvals or pre-approvals from all necessary Central Approvers or other specific agency or departmental approvals required by statute. (e.g., OIT - Governor's Office of Innovation & Technology; OSPB - Office of State Planning & Budgeting)
- ____ Personal Services Review by agency/institution HR Office or agency/institution Personal Services Program Waiver; **OR** Certification Form
- ____ Appropriate State Fiscal Rule waiver request and subsequent approval attached to the contract packet. **CHECKPOINT 2:** There are several instances when a Fiscal Rule waiver request is required. As a delegate or contract reviewer, it is your responsibility to know.
- ____ Other approvals as required by applicable statutes and Fiscal Rule 3-1
- ____ At least three complete copies of the contract to be reviewed and approved (at least four copies if a lease)
- ____ A Copy of the original contract/previous amendments and all other mod tools used (option, change order, task order, funding letter, etc.) is part of the contract request and contract file.
- ____ All attachments/exhibits referenced in the contract are correctly labeled and included as part of the contract packet.
- ____ A Late Justification Letter is attached because it is being submitted to the State Controller's Office or to your agency/institution controller delegate **late**. This means the targeted start date has passed **without the approval** of the State Controller or delegate, and/or a deliverable date listed on the scope of work has passed **without** a fully signed

contract in place. The late letter should address whether the vendor has been working and/or if any payments have been made to the vendor.

_____ A memo in accordance with the State Controller's Policy, "**Processing Commitment Vouchers that Violate State Statutes**" for a **statutory violation** is attached because the vendor has been working and/or payments have been made to the vendor prior to the contract, amendment, or other modification being signed by the State Controller or his delegate. There is more information regarding statutory violations on page 3.

_____ A copy of the "**Information of File**" page from the Secretary of State's web page showing the vendor's status to be in "good standing". Vendors who are doing business with the state should be registered with the Secretary of State's Office.

ENCUMBRANCE ISSUES:

_____ Does the contract span two Fiscal years? **CHECKPOINT 3:** If so, the encumbrance should be set up to reflect the dollars spent in the current Fiscal year. **Exception:** If the contract is a 100% federally funded contract, then the full amount of the contract can be encumbered.

CONTRACT ISSUES:

Opening paragraph checklist:

_____ a. Made date filled in (please review policy on "Contract Dates", dated April 2007)

_____ b. Agency/institution full name and mailing address

_____ c. Full legal name of contractor, state of legal formation and entity status (corporation, limited partnership, general partnership, sole proprietor, non-profit corporation). Does the full Contractor name in the first paragraph of the contract, match the name exactly as it appears on the SOS website and on the contract signature page?

CHECKPOINT 4: All references to the contractor name must be the correct legal entity name. If an entity is a general partnership, (general partnerships are not required to be filed with the Secretary of State) obtain the names and addresses of **each** partner in a letter or email to be placed in the contract file (even if only one partner signs).

_____ d. Contractor/lessor complete business address

_____ e. Are there other entities (other than the State and one other vendor) that are also parties to the contract that are not identified in the opening paragraph? **Refer to Item c. above.** In addition, these entities must appear on the signature page with the proper signatures.

Body of contract checklist:

_____ a. Recitals to include: 1) funds available statement, 2) authorized by appropriation, and 3) federal or state statutory authority for purchase or program cited

CHECKPOINT 5: If you are citing a State statutory authority, it is your responsibility or your agency controller to check the statute(s) to see if your agency has the authority to enter into the contract.

_____ b. Definitions

_____ c. Order of Precedence clause

_____ d. Term or Performance Period: This is the period for contract performance. **CHECKPOINT 6:** The term or performance period is not the "Effective Date". The Effective Date is the date the contract is signed by the State Controller or State Controller delegate. This signature approval (SCO signature or delegate) is required for performance to begin, or for the State to become obligated for payment.

_____ e. Compensation method, timing and amount defined

_____ f. Have you included language in the "compensation" section of your contract that clearly states the maximum amount payable for the contract term? Please refer to Fiscal Rule 3-1 for required language to be included in your contract. Also, if you have a multi-year contract the "maximum amount" payable should be properly allocated by Fiscal year and stated in this section. **CHECKPOINT 7:** The Agency/institution must make required findings in writing by CRS 24-103-503 to utilize a multi-year contract. Also, the State must be the party to initiate the renewal or extension of a contract. If your contract does not have a maximum amount stated, then a Fiscal Rule waiver should be requested by your agency/institution controller.

_____ g. Termination provisions (termination for default and termination for convenience)

_____ h. Future funding contingency clause

- _____ i. The current State Special Provisions have been incorporated in the body of the contract **as the page before** the current contract signature page
- _____ j. **All pages of the contract** have been numbered appropriately, such as 1 of _____ pages, 2 of _____ pages, 3 of _____ pages, etc.
- _____ k. Have you **properly identified, labeled and numbered** **all pages** of all referenced exhibits and/or attachments? Does the text of the contract accurately cite exhibits and attachments by both number or letter designation and specific page reference?
- _____ Is there language in your contract that allows for an advance payment to the contractor, please remember you are required to obtain a Fiscal Rule waiver from the State Controller's Office **prior to** forwarding your contract through the central approval process or to your agency/institution controller delegate (unless the advance payment meets the specific exception requirements listed in the policy on "Advance Payments"). **CHECKPOINT 8:** Advance payments are not the normal mode of business for the state as vendors are expected to have adequate resources or working capital to provide goods/services to the state. In addition, an advance payment results in a loss of interest earnings for the state and more importantly a risk of loss of the funds if the vendor goes bankrupt or the vendor has not performed adequately. For more information regarding an advance payment, please refer to Fiscal Rule 2-2 and the policy on "Advance Payments".
- _____ Does the contract contain representations by the state regarding the tax treatment of the payments to the vendor?
- _____ Have you included the required language in the body of the contract and the appropriate sample forms as an exhibit(s) to your contract that allows for the use of certain modification tools as set out in the "State Contract Modification" Policy (issued by the State Controller in April 2007)? **CHECKPOINT 9:** You may not use a Modification Tool if the prerequisites of their use are not met. Several "Mod Tools" **REQUIRE** unit pricing or rate pricing. Do not use a Mod Tool if you cannot meet these requirements in the contract.
- _____ Is there language in your contract; exhibit and/or other documents as part of your contract packet include the use "of acronyms"? **CHECKPOINT 10:** Remember to explain what the acronyms mean.
- _____ Do any dates stated in the scope of work **conflict** with the time of performance stated in the contract? **CHECKPOINT 11:** If so, you or the program manager will need to attach a memo that verifies that no work has been performed and no payment has been made to the vendor.
- _____ Does the term of the contract, including all options, **exceed** 5 years? **CHECKPOINT 12:** If so, only the State's Division of Purchasing Director can grant the approval and this approval must be in writing and placed with the contract file.
- _____ Do you have a copy of a current insurance certificate on file for the contractor? **CHECKPOINT 13:** Please insure that the limits listed on the certificate and any other requirements are clearly defined in the contract.
- _____ Do the names on the insurance certificate match the name of the Contractor? Are the amounts of liability coverage correct?
- _____ Is this a personal services contract (other than Capital Construction) that requires a performance bond?
- _____ Is this an unusual contract situation that warrants an explanation memo as to the reasons and includes other supporting information that is needed to document the contract file. A few examples: A settlement with a vendor or a situation where the State may be sued because an agency changed its name and infringed on a copyright.

CONTRACT DATES:

- _____ **CHECKPOINT 14:** Know the difference between the "made date", the "effective date", and the "performance date".
- _____ Does your contract contain a "retroactive" effective date? **One exception exists** that permits a retroactive effective date: If your contract/amendment contains a retroactive date **AND** the contract dollars are paid for with **federal funds**, then an allowance is granted if the following conditions are met: 1) The original contract must contain language to allow for this based on the Federal Grant Award/Letter; 2) A copy of the federal grant award/letter that permits a retroactive date must be part of the contract packet and file; and 3) Despite a retroactive effective date, **NO actual payments** can be made until the contract has been signed by the State Controller or controller delegate.
- _____ Is there language in your contract that contains an "automatic renewal" of the contract? **CHECKPOINT 15:** The statutes do not permit this, and the language in any contract will need to be changed to have a definite beginning and ending date with a proper modification tool utilized to renew the contract.
- _____ Is the "targeted" effective date of the contract a different date than any of the dates included in the scope of work. **CHECKPOINT 16:** A date in the SOW that is earlier than the targeted effective date may indicate a statutory violation. Moreover, using specific dates in an SOW can throw off an entire schedule right from the beginning. Draft the SOW so

that performance activity begins upon the effective date, with milestones or deliverables due a calculated number of days “after the effective date” and after each milestone completion. Also, it is best to have the contract final end date be a few weeks or a month after the agreed work schedule anticipates completion. This builds in a cushion for the contract to be fully completed despite an unexpected delay.

Do you have a statutory violation? The *Effective Date* is the date the contract is signed by the State Controller or the State Controller delegate. The following term clause is recommended: “This contract shall be effective upon approval by the State Controller, or designee, or on (*estimated start date*), whichever is later.” If an estimated *start date* is used without the above quoted State Controller caveat, make sure the contract will reach the Central Contract Approver and/or your agency/institution State Controller delegate well before the *estimated start date* to allow the State Controller or agency/institution delegate sufficient time for his/her review. If the *estimated start date* passes before the contract reaches a Central Contract Approver or State Controller delegate, you will be asked to confirm in writing that the vendor has not started work and that a violation of CRS 24-30-202 has not occurred. **Finally, the initial term of the contract should not commence on a date before the effective date.** If a delegate is performing all the assessment required by the SCO delegation, it will take him or her adequate time to review the documents as well.

POTENTIAL LEGAL ISSUES:

Does your contract contain or propose a binding arbitration clause? **CHECKPOINT 17:** This is not allowed per Fiscal Rule 3-1, Special Provision #6 – Choice of Law.

Is the contract with an Indian tribe? **CHECKPOINT 18:** If so, you will need the counsel of the Attorney General’s Office because issues exist between federal tribal law and state law.

Does the contract contain any modification provisions that are inconsistent with the State Controller’s policy on “State Contract Modifications” (policy dated February 10, 2003)? **CHECKPOINT 19:** Check that you are using the correct Mod Tool and that the contract has the language that “matches” that Mod Tool. Don’t attach a Mod Tool or tools to a contract unless it fits!

Has the Contractor proposed a clause that modifies the **indemnification clause** in the Special Provisions? **CHECKPOINT 20:** If so, that modification must obtain Attorney General review and approval. Don’t sign the contract until that review has been completed to avoid having to re-execute the contract. Also, you must obtain a Fiscal Rule waiver approval. This waiver, along with the reasons for the request, must be forwarded to the State Controller and to the Attorney General’s Office. For Higher Education: Consult with your institution’s legal counsel.

Have any of the current State Special Provisions (dated October 25, 2006) been altered? **CHECKPOINT 21:** If so, you must obtain a Fiscal Rule waiver approval. This waiver, along with the reasons for the request, must be forwarded to the State Controller and to the state’s contract attorney in the Attorney General’s Office.

Does the contract contain Governmental Immunity provisions that are inconsistent with Chapter 6, Appendix A of the Colorado Contract Procedures and Management Manual?

Does the contract contain or does the vendor propose limitation of liability provisions that either: 1) limits the vendor’s liability for particular types of damages OR 2) caps the recovery in dollars to which the State is entitled? **CHECKPOINT 22:** These provisions require Attorney General review and approval. Contact the AG before you sign a contract with these provisions.

Is this a contract that has been written strictly by the contractor? In other words, is this a vendor contract? **CHECKPOINT 23:** If so, get the involvement of the Attorney General’s Office upfront so all contract issues are resolved prior to the contract being signed by the vendor and the State. Here are a few other important items to be mindful of: 1) Your contract should look like and read like a “state” contract, not a vendor contract; and 2) More importantly, only the State Controller can prescribe the form of commitment document. A vendor’s agreement/contract **is not** an approved commitment document.

Has the contractor insisted that some of their terms and conditions be included in the contract? **CHECKPOINT 24:** If so, it is **highly likely** that the vendor’s terms and conditions conflict with the state’s terms and conditions. Please contact the Attorney General’s Office prior to the contract being signed by the vendor and/or state.

Is this a revenue-generating contract that requires the state to compensate the vendor in any way? **CHECKPOINT 25:** If so, all State Controller reviews and approvals **are required**. NOTE: Revenue generating contracts are tricky. Most agencies/institutions really do not know the difference between this type of contract and a personal services contract. In most cases, you have a combination contract, a “Personal Services” contract mixed with a “Revenue-generating” contract, which is the reason, your contract needs to have a State Controller review and approval.

Does the contract contain all of the terms and conditions and Statement of Work that are required in the current “Colorado State Model Contract for Services and Goods” (developed April 2007)?

- _____ If the contract is with a contractor who is required by law to have a license (such as a dentist, doctor, etc.), do you have a current certification or license from the contractor?
_____ a. Are there any notations or stipulations on the contractor's licenses? **CHECKPOINT 26:** If so, please consult with the Attorney General's Office or your institution's legal counsel.
- _____ If HIPAA requirements are applicable, does the contract contain a signed Business Associate Addendum and/or appropriate HIPPA language?
- _____ Are there any strikeouts within the contract and/or exhibits, which are not initialed by both signatories of the contract?

PAGINATION & CONTRACT REFERENCES:

- _____ Are **ALL PAGES** of the contract numbered including *the Special Provisions*?
_____ a. Are the contract pages numbered correctly? For example: If your page number looks like the following, "Page 6 of 5" or something similar, then clean up of your pagination is required.
- _____ Do **ALL PAGES** of your contract exhibits/attachments, etc., have page numbering? **CHECKPOINT 27:** If you have multiple pages to an exhibit/attachment then the pages should be numbered such as 1 of _____ pages, 2 of _____ pages, 3 of _____ pages, and so forth. Again, have the text of the contract cite to exhibit and appropriate page number.
- _____ Are **all exhibits/attachments**, etc., properly identified? If a contract refers to "Exhibit A," then the attached exhibit should be marked on the first page as "Exhibit A." Also, when more than one exhibit is being attached, each exhibit should be placed in the proper order as part of the contract (i.e. - A, B, C, D or 1, 2, 3, 4 not as D, B, A, C, etc.).
- _____ Amendments, Renewals, and other similar contract modifications often improperly refer to the original contract by indicating the wrong original contract routing number, or to the wrong provisions in the original contract.
CHECKPOINT 28: Double-check all references used in the body of the contract. For example, if your renewal letter says "Pursuant to Paragraph 3(a) of the original contract....." make sure that Paragraph 3(a) of the original contract contains the information you intended to cite, as well as that there is a provision entitled "3(a)". In other words, proof read every citation very carefully.

SIGNATURE & SIGNATURE PAGE REQUIREMENTS:

- _____ Did you include a letter with the contracts sent to the contractor for signature that explain the state's signature requirements? **FYI: Chapter 6 of the Colorado Contract Management and Procedures Manual contains a thorough discussion regarding these requirements.**
- _____ Is the vendor's FEIN accurate on the signature page and CLIN?
- _____ Required contract signatures by all authorized agency/institution signatories (the Office of the State Controller must have a current "*Record of Authorized Signatures*" of all agency/institution signatories on file). **CHECKPOINT 29:** Similarly, be familiar with the limits of your agency/institution's delegation from the SCO and exercise only those specific functions for which you have authority. If you have questions, contact the State Controller's Office.
- _____ Is there evidence of stamped and/or photocopied signatures on the signature page? **CHECKPOINT 30:** If so, then you will need to ask for original signatures. The state does NOT accept stamped or photocopies signatures.
- _____ If the entity is a corporation, an attestation is included to verify the authority of the contract signer to bind the vendor-entity to the contract.
- _____ Is there a notary signature on the signature page? **CHECKPOINT 31:** The state does not recognize a notarized signature since a notary only confirms that the individual is the person they say they are; a notary does not verify the authority of the individual to bind the company.
- _____ Does the individual signing for the contractor have apparent authority based upon their position relative to their organization? **CHECKPOINT 32:** For more information regarding the state's signature requirements, review Chapter 6 of the Colorado Contract Procedures & Management Manual.
- _____ Is there documentation that supports the signature authority of the individual signing the contract (i.e., bylaws, a board resolution or articles of incorporation)? This documentation should be filed with your contract and the documentation should **clearly state the names and titles** of those who do have signature authority.
- _____ Signature block must include: 1) Full legal name of contractor as it appears on page 1; 2) Federal ID number must match the CLIN and all other documents; 3) All original signatures; 4) Printed name and title of all signatories; 5) Agency/institution name; 6) Corporate seal (if applicable)

_____ **CHECKPOINT 33:** If you are contracting with an intergovernmental entity such as a city, county or school district then insure you are obtaining the correct signatories. City signatories are either the mayor or city manager; A County signatory is always the county commission chairperson; A school district signatory is usually the superintendent. For more information regarding the state's signature authority requirements, please refer to Chapter 6 of the Colorado Contract Procedures & Management Manual.

CONTRACT TYPE ISSUES:

_____ Is this an interagency agreement?

- _____ a. Have you used the state's standard form? **CHECKPOINT 34:** If not, please review Fiscal Rule 3-1 and then use the "Risk Assessment Checklist" (located on the State Controller's Office website, select the "Contracts" tab located in the left hand column) to determine if your agreement will need further review by the Office of the State Controller.

_____ Is this an equipment lease? Does the company leasing the equipment to the State want to assign the payments to a Finance company? **CHECKPOINT 35:** If so, a letter from the company (signed by an authorized signatory) needs to be obtained with a statement that the Finance company has agreed to the assignment of payments. **NOTE:** The encumbrance needs to be set up with the company (not the Finance company) for 1099 purposes. **It is a much less complicated arrangement if the leasing company will do the financing or arrange financing for the State rather than the State obtaining separate financing.** Also refer to the State Controller's policy on "**Lease Purchase Agreements**".

_____ If the State must arrange its own third party financing (and the lessor/supplier was paid off), has the finance company agreed to assign all warranties and maintenance rights to the State so the State may proceed directly against the lessor/supplier if equipment fails? Who holds the title to the equipment during the lease to the State—the finance company or the lessor/supplier? Is there a clause that gives the State the right to take title at the end of the lease?

_____ For any lease-purchase, have all the prerequisites and requirements of CRS 24-82-801 "Lease-Purchase Agreements for Acquisition of Real or Personal Property" been complied with?

_____ Is this an easement that costs more than \$40,000? If so, an explanation as to how price was determined is required.

_____ Is there language in the contract that refers to a "contingency fee" or that the contractor "collects fees"?

CHECKPOINT 36: This is a requirement of SB 04-171 and these types of contracts are considered "high risk", involve the review and approval of the Office of State Planning & Budgeting **AND** also need the approval of the Attorney General and the State Controller.

_____ If this is a real estate purchase contract that is for more than \$100,000, is an appraisal attached?

_____ If the appraisal reflects a depreciated value, please insure there is adequate documentation as part of the contract file.

_____ Is this a novation agreement? Have you used the standard form agreement set out in Chapter 10 of Colorado Contract Procedures & Management Manual and obtained the required signatures?

- _____ a. Have you determined the correct dollars owed to the State in order to liquidate monies with the old vendor and then have available dollars encumbered for the new vendor?

CAPITAL CONSTRUCTION CONTRACTS: If the answer to any one of the questions listed below is "YES", then your contract will need review by the State Buildings Program.

_____ a. The services are professional and include one of the following: (architect, land surveyor, industrial hygienist, engineer) and a commitment document other than a contract was used.

_____ b. Are any of the end dates listed on the insurance certificate expired?

_____ c. Are the dollar amounts for the required insurance provisions different than the requirements listed in the General Terms and Conditions as part of the approved waived contract form?

_____ d. Is the state not listed as an "Additional Insured" in the endorsement box of the insurance certificate?

_____ e. Are the required bonds not included in the contract packet?

_____ f. Are the bonds not dated properly?

_____ g. Are the powers of attorney, which verify the proper authority of the signatory, not included in the contract packet?

LEASE CONTRACTS:

_____ Have you used the most recent version of the state's standard contract lease form (7 page contract) without making any changes to the lease form?

- _____ Have additional provisions be added to the state's standard lease form? **CHECKPOINT 37:** If so, a "Risk Assessment" review must be performed and it is highly likely that your lease will need the review of the Attorney General's Office.
- _____ **CHECKPOINT 38:** If you have chosen to not use the state's standard lease form and have either used a lease form your agency/institution created or a vendor contract form, you will need to contact Clark Bolser in the state's Real Estate Program Office (303-866-4759).
- _____ Do you have an amended, extended, or renewed lease, that includes language that requires a payment by the Lessor for "build out" using tenant allowance OR a termination clause that requires payment by the State? If so, then please consult with the Attorney General's Office and the State Controller's Office.
- _____ Has the existing landlord transferred ownership to a new landlord? **Please refer to the State Controller's policy, "Lease Payments to New Landlord".**

FISCAL RULE ISSUES:

- _____ Are there any vendor terms stated in with the contractors' proposal, on a wage rate or fee schedule, or other vendor document that has terms related to outstanding invoices that are to be paid within 30 days and at an interest rate above what state law allows? **CHECKPOINT 39:** The statute allows the state to make payment within 45 days and after that date interest is to be compounded at 1%. Terms other than these require a Fiscal Rule waiver and subsequent approval by the State Controller. The specific Fiscal Rule is 2-5.
- _____ Does the contract speak to an outside bank account? **CHECKPOINT 40:** The State Treasurer must grant prior approval and his/her approval must be placed with the contract file.
- _____ Was a purchase order initially issued for the services then a follow-up contract was written for the same services and for the same vendor at a later date? **CHECKPOINT 41:** A Fiscal Rule waiver approval is required prior to the issuance of a purchase order. The approval must be granted in writing by the State Controller's Office and this documentation must be with the contract file. **Also refer to the State Controller's policy on "Split Purchases".**

AMENDMENTS:

- _____ Have you used the state's standard amendment form set out in the policy, "State Contract Modifications" issued by the State Controller in April 2007?
- _____ Does your amendment recite additional consideration to the State for the contract change? **CHECKPOINT 42:** If not, then additional consideration must be clarified in the contract amendment. An amendment cannot be used to increase the cost to the State for the same scope of work and services as the original contract.
- _____ Are additional dollars part of the current amendment?
 - _____ a. Is the cost a significant increase from the original contract (more than 30% is considered significant)? **CHECKPOINT 43:** If so, you have a "high risk" amendment that needs Attorney General and State Controller Office review, as well as, the agreement of State Purchasing for the significant cost increase.
- _____ Do any of the new exhibits and/or attachments have any term or conditions or Statement of Work requirement or payment schedule requirements that conflict with any part of the original contract?
- _____ Is the purpose of this amendment to make a settlement with the vendor for any reason? **CHECKPOINT 44:** If so, your amendment will need to have a review and approval by the State Controller.
- _____ Does the encumbrance document equal the amount of the amendment? **CHECKPOINT 45:** If not, an explanation as to the reasons must be part of the contract request and signed off by your agency/institution controller.
- _____ Is a spreadsheet attached to the contract packet showing the dollar amount of the original contract and every amendment thereafter? Mathematical errors are being found in increasing numbers on contracts with multiple amendments. To help eliminate these errors and shorten the contract review and approval time a spreadsheet is helpful.